

# **ATTACHMENT 2**

## **SPECIFICATIONS AND DRAWINGS CONCRETE PAD FOR SLIDE GATE OPERATOR**

### **1. GENERAL INFORMATION**

#### **1.1. Description of the work**

The work consists in the demolition of the existing concrete pad, where the gate operator is supported, removal and reinstallation of steel columns, support plates and reinforcement. Concrete demolition and steel elements removal and reinstallation shall be done at ten (10) concrete pads: two (2) at Diplomatic gate and eight (8) at the North Gate as shown on drawings provided within this document. New concrete pads will be built of reinforced concrete, steel embedded angle and galvanized anchor bolts for the operator enclosure and steel columns, supports and associated reinstallation.

#### **1.2. The Contractor shall furnish all equipment, materials, parts, labor, supervision, management, tools, transportation, incidental engineering, and other items necessary to provide the services outlined below and described in this Scope of Work (SOW) at the US Embassy, San Salvador, El Salvador.**

#### **1.3. The information provided in this SOW is intended to guide demolition, removals, construction, assembly, and installation by establishing existing conditions and desired character, appearance, and function of the required facility systems.**

#### **1.4. Work includes all specifications provided in this document.**

### **2. SPECIFICATION**

#### **2.1. Existing Utilities**

The Contractor shall verify actual locations of all placed utilities and shall coordinate with the Government regarding any future planned utility installations that affect the work. Coordination of all site work on the project, including utility work, is the responsibility of the Contractor. It is the Contractor's responsibility to confirm the specific locations of the existing utilities and construct new utility services for the works described herein.

#### **2.2. Demolition and Steel removal.**

Do not begin demolition until authorization is received from the Contracting Officer. The work includes the removal of the steel columns and support plates, demolition of existing 1.25 x 0.51 x 0.40 (aprox) mt. concrete pad. Remove all debris from Government property daily, unless otherwise directed.

Steel items indicated to be reinstalled shall be dismantled at connections in a manner that will prevent bending or damage. Salvage for reuse steel elements indicated in this document or as directed by the Contracting Officer Representative.

Store salvage materials or items in a safe, adequate storage facility free from damage for a later reinstallation as indicated and shown on drawings. Store materials that cannot be removed daily in areas specified by the Contracting Officer.

In the interest of occupational safety and health, perform the work in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections of the manual include section 5 for PPE.

### 2.3. Concrete Pad

It shall be considered all costs for labor, supervision, management, tools, equipment, facilities, transportation, incidental engineering, and other items necessary for the construction of the concrete pad as indicated and shown on drawing provided. The work also includes concrete forming, reinforcement fabrication and placement, anchor bolt fabrication and installation, concrete pour, finish and curing. and steel column, plates, and anchorage installation.

Concrete must comply with the following requirements:

- Compression strength at 28 days f'c: 4000psi (280 Kg/cm<sup>2</sup>).
  - Premix concrete ASTM C94
  - Field fabricated concrete:
    - Cement: ASTM C1157, Type GU
    - Aggregates: grading complying with ASTM C33
      - ✓ Cover aggregates where piled and disposed for mixture.
    - Water:
      - ✓ Water shall be clean, free from injurious amounts of oils, acids, alkalis, salts, organic matters, or other substances deleterious to concrete. Water shall be transparent.
      - ✓ If temperature needs to be control Ice can be added to water previously to be mixed with concrete components.
      - ✓ Protect water from contamination while stored and transported.
- Admixtures: chemical admixtures shall comply with ASTM C494.
- Slump; ASTM C143: 4" +/- 1"
- Concrete shall not be placed with temperature above 32°C.
- Improve workability to the mix by adjusting the grading in the aggregates and/or the use the admixtures rather than adding water.
- Concrete covers; ACI 318:
  - Sides: 2 inch
  - Bottom: 3 inch
- Steel reinforcement: comply with ASTM A615, Grade 40.
- Steel angle embedded in concrete. ASTM A36

### 2.4. Structural Steel

Contractor shall be considered all costs for labor, supervision, management, tools, equipment, facilities, transportation, incidental engineering, and other items necessary for the re-installation of steel column and reinforcement supports. Structural steel shall comply with:

- Steel Tubes ASTM A500

- Steel plates ASTM A36
- Do not perforate steel shapes unnecessarily unless authorized by the COR.
- Store materials in a proper way to avoid damage.
- Anchor Bolts shall comply with:
  - Dimension: as shown on Drawings
  - ASTM F1554, Gr. 55.
- Painting: Apply an alkyd, solvent-based metal primer and an alkyd semigloss finish coat. Dry film thickness shall be in accordance with the manufacturer's specifications. Color to be selected from the manufacturer's color chart and matching adjacent surface finish color as approved by the COR.

### **3. CLEANING**

All intervened areas must be cleaned. All trash and debris resulting from all work must be removed outside the compound limits. Area shall be left free of any signs of intervention. The COR must approve the area is completely clean before the contract is complete.

### **4. AS-BUILT DRAWINGS**

Upon completion of the work the contractor shall submit the as-built drawings which shall be a record of the construction as installed and completed by the contractor. They shall include all the information shown on this document and a record of all deviations, modifications and all additional work or changes not appearing the original drawings.

### **5. WARRANTY**

A one-year warranty shall be extended to the US Embassy, San Salvador for all installation and workmanship for all activities described within the scope of work. Warranty period will begin after all work has been accepted by the COR. The contractor shall provide the US Embassy, San Salvador, with a copy of the warranty this a point of contacts for any warranty issues. Warranty issues must be responded to within 24 hrs from time of notification. Within 15 days of warranty expiration the contractor shall conduct a warranty inspection jointly with the COR to ensure there are no warranty defects prior to the warranty's expiration.